

Some information and facts about Finland

<http://www.environment.fi/climate>

Climate change mitigation in Finland

Climate change is for the most part brought on by greenhouse gas emissions into the atmosphere as a result of human actions. The global effects of the phenomenon depend on the volume of emissions and the future development of emissions.

Climate change is a global problem and mitigation is strived at through various means. International cooperation is a focal factor in mitigating climate change. Even if emissions are reduced, measures must be taken to adapt to climate change.

Signs of climate change in Finland

Temperature has increased by 0.76°C in the 20th century

A comprehensive assessment of observed changes in Finland's temperature and precipitation was made by Tuomenvirta (2004). The assessment was based on about 300 temperature and 700 precipitation data series, which were thoroughly homogenised. The longest series exceeded 150 years but the systematic analysis was mainly focused on the 20th century.

According to linear trend tests, the mean temperature in Finland increased by 0.76°C in the 20th century. The warming took place during the first two and last three decades of the century, while a slight but statistically insignificant cooling occurred in the time period between them. There was also some evidence of warming in the late 19th century, but the number of observation stations was too small for a reliable analysis.

The warmest year on record was 1938, when the average over the whole country was 2.4°C higher than the mean for the reference period of 1961-1990. The second warmest year was 1989, and the third warmest 2000. By far the coldest was 1867, the year of the great famine, with the nationwide average 3.4°C below the reference period.

Most of the warming occurred in spring. The mean temperature in March-May over the whole country was 1.8°C higher in 1963-2002 than in 1847-1876. The diurnal temperature variation had become smaller, again mainly in spring. A similar trend has been observed widely on the land areas of the Northern Hemisphere, together with an increase of cloudiness.

No significant, nation-wide precipitation trends were found. This is in contradiction with a 15-20% increase of precipitation in Sweden in the 20th century. Both countries have had changes in instrumentation and observation practices. The wettest year in Finland was 1974, with a nationwide mean of 740 mm, while the driest was 1941, with only 394 mm. In addition to significant year-to-year variation, the precipitation climate of Finland is also characterised by notable inter-decadal variability, which partly offsets the statistical detection of trends.

Finland's greenhouse gas emissions

Finland submits annual inventories of greenhouse gas emissions to the UNFCCC Secretariat and to the EU Commission.

Statistics Finland has been designated as the national authority with overall responsibility for the greenhouse gas inventory in Finland. The link to the Statistics Finland's greenhouse gas webpage is located on the right under Related Links.

The calculation of greenhouse gas emissions in Finnish Environment Institute (SYKE)

The following emission data for the greenhouse gas inventory is produced by SYKE:

- greenhouse gas emissions from waste and waste handling
- emissions of F-gases (HFC-compounds (fluorohydrocarbons), PFC-compounds (perfluorohydrocarbons) and sulphur hexafluoride)